

**AMENDMENT UNDER 37 C.F.R. 1.116**

**EXPEDITED PROCEDURE**

**EXAMINING GROUP 2124**

**PATENT**

**Application # 09/732,570**

**Attorney Docket # 1999P07535US04 (1009-064)**

**REMARKS**

Reconsideration of this application is respectfully requested in light of the foregoing amendments and the following remarks.

Each of claims 52-58, 84-87, and 90-96 has been amended for reasons unrelated to patentability, including at least one of: to explicitly present one or more elements implicit in the claim as originally written when viewed in light of the specification thereby not narrowing the scope of the claim, to detect infringement more easily, to enlarge the scope of infringement, to cover different kinds of infringement (direct, indirect, contributory, induced, and/or importation, etc.), to expedite the issuance of a claim of particular current licensing interest, to target the claim to a party currently interested in licensing certain embodiments, to enlarge the royalty base of the claim, to cover a particular product or person in the marketplace, and/or to target the claim to a particular industry.

Claims 52-58 and 84-96 are now pending in this application. Claims 52, 95, and 96 are in independent form.

**I. Claim Rejections Under 35 USC § 112**

**A. Claim 52**

Claim 52 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite due to insufficient antecedent basis for the phrase "said another section" in line 10. This rejection is respectfully traversed.

Claim 52 has been amended to correct a typographical error.

Thus, reconsideration and withdrawal of this rejection is respectfully requested.

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**B. Claims 88-90 & 94**

The present Office Action recites “[p]er claims 88-90 and 94, it is unclear how the limitations in these claims are related and further limit the limitations in claim 52.” See Page 2.

Claim 52 recites “capturing a status of said instruction as it is executed”.

Claim 88 recites “comparing a scan count status word to a current value of a scan counter to determine that said status came from a single scan cycle.”

Claim 89 recites “copying a scan counter value to a scan count status word to determine that said status came from a single scan cycle.”

Claim 90 recites “comparing a scan count status word to a current value of a scan counter to determine that said status came from a single scan cycle.”

Claim 94 recites “determining a status window size by a number of operand values returned from an execution of said section of said program, said status window adapted to display said status of said instruction.”

Since each of claims 88-90 and 94 relate to the “status” recited in claim 52, Applicants respectfully submit that the assertion that “[p]er claims 88-90 and 94, it is unclear how the limitations in these claims are related and further limit the limitations in claim 52” does not properly support the rejections of claims 88-90 and 94. Accordingly, Applicants respectfully request the withdrawal of each of those rejections.

**C. Claim 86-87**

The present Office Action erroneously recites “[p]er claims 86-87, in line 2 the term ‘adapted to’ is unclear. It has been held that the recitation that an element is ‘adapted to’ perform a function is not a positive limitation but only requires the ability to so perform. It does

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not constitute a limitation in any patentable sense." In support of this assertion, the present Office Action cites *In re Hutchison*, 69 USPQ 138 (C.C.P.A. 1946). See Page 3.

With all due respect, the cited case from 1946 has been superseded by more recent case law. The Federal Circuit has interpreted the word "adapted" as preceding "functional language [that] limits the scope of these claims to devices that have the capability of" performing the recited function. See, *R.A.C.C. Indus., Inc. v. Stun-Tech, Inc.*, 178 F.3d 1309, 49 U.S.P.Q.2d 1793 (Fed. Cir. 1998) (*cert. denied*, 526 U.S. 1098 (1999)). Because such functional language serves as a claim limitation, a reference cited to support a rejection of a claim must describe a structure(s) capable of performing each claimed function preceded by the term "adapted."

Further, in the case of *In re Land*, the CCPA ruled on a relevant claim that recited "said color-providing substances associated with at least the inner photosensitive emulsion layers are *adapted to be rendered diffusible* in said liquid composition *only after at least substantial development* of the next outermost photosensitive ... layer has occurred." See, *In re Land*, 368 F.2d 866, 151 USPQ 621, 635 (C.C.P.A. 1966). The CCPA noted that the italicized portions of the claim were functional but held the claim patentable in view of the **functional limitations**.

In yet another case, the Federal Circuit reversed an Examiner's rejection of a patent claim due to the Examiner's failure to provide patentable weight to **functional limitations**. See *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Thus, the assertion that "[p]er claims 86-87, in line 2 the term 'adapted to' is unclear. It has been held that the recitation that an element is 'adapted to' perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense" is contrary to current law. Accordingly, Applicants respectfully

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request the examination of each of claims 86-87 construed according to their proper functional limitations.

**II. The Anticipation Rejection**

Claims 52-62 were rejected as anticipated under 35 U.S.C. 102(e). In support of the rejection, Logan (U.S. Patent No. 6,243,857) was cited. This rejection is respectfully traversed.

Logan fails to establish a prima facie case of anticipation. See MPEP 2131. To anticipate expressly, the "invention must have been known to the art in the detail of the claim; that is, all of the elements and limitations of the claim must be shown in a single prior art reference, arranged as in the claim". *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001). The single reference must describe the claimed subject matter "with sufficient clarity and detail to establish that the subject matter existed in the prior art and that its existence was recognized by persons of ordinary skill in the field of the invention". *Crown Operations Int'l, LTD v. Solutia Inc.*, 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed. Cir. 2002). Moreover, the prior art reference must be sufficient to enable one with ordinary skill in the art to practice the claimed invention. *In re Borst*, 345 F.2d 851, 855, 145 USPQ 554, 557 (C.C.P.A. 1965), *cert. denied*, 382 U.S. 973 (1966); *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1354, 65 USPQ2d 1385, 1416 (Fed. Cir. 2003) ("A claimed invention cannot be anticipated by a prior art reference if the allegedly anticipatory disclosures cited as prior art are not enabled").

Logan allegedly recites "[w]hen a block has been selected, a breakpoint can be set at that block with an Insert/Remove Breakpoint tool bar button 182. This button toggles the breakpoint state at the currently selected block. It inserts a breakpoint, when no breakpoint exists, and

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removes an existing breakpoint. A color of a block that contains a breakpoint appears in red. Current flowchart execution stops when program flow reaches the block with the breakpoint, during the normal execution cycle. Program flow stops before the chart executes the breakpoint ..." See col. 8 line 62 through col. 9, line 4.

Each of independent claims 52, 95, and 96, from one of which each of claims 84-94 depends, recites "without stopping execution of said entire user control program, automatically jumping to said second section of said memory during real time execution of said entire user control program when an instruction indicated to be debugged is to be executed." Logan does not teach expressly or inherently "without stopping execution of said entire user control program, automatically jumping to said second section of said memory during real time execution of said entire user control program when an instruction indicated to be debugged is to be executed".

Accordingly, it is respectfully submitted that the rejection of claims 52, 95, and 96 is unsupported by Logan and should be withdrawn. Also, the rejection of each of claims 53-58 and 84-94, each ultimately depending from independent claim 52 is unsupported by Logan and also should be withdrawn.

Contrary to an erroneous assertion of the present Office Action (*see* Page 7), claim 86 recites, yet Logan does not expressly or inherently teach or suggest, "providing a machine code instruction adapted to save a power flow status associated with said section of said program." Where in Logan is any "machine code instruction adapted to save a power flow status", let alone a "machine code instruction adapted to save a power flow status associated with said section of said program"? It simply is not present. Because Logan describes nothing close to the claimed limitation, Applicants respectfully suggests that the rejection of claim 86 is unclear, incomplete,

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and improper. Accordingly, it is respectfully submitted that the rejection of claim 86 is unsupported by Logan and should be withdrawn.

Contrary to an erroneous assertion of the present Office Action (*see* Page 8), each of claims 88 and 90 recite, yet Logan does not expressly or inherently teach or suggest **"comparing a scan count status word to a current value of a scan counter** to determine that said status came from a single scan cycle." Where in Logan is any **"scan count status word"**, let alone an activity **"comparing a scan count status word to a current value of a scan counter** to determine that said status came from a single scan cycle"? Again, it simply is not present. Because Logan in no way discloses the claimed limitation, Applicants respectfully suggests that the rejection of claims 88 and 90 is unclear, incomplete, and improper. Accordingly, it is respectfully submitted that the rejection of each of claims 88 and 90 is unsupported by Logan and should be withdrawn.

Contrary to an erroneous assertion of the present Office Action (*see* Page 8), claim 89 recites, yet Logan does not expressly or inherently teach or suggest, **"copying a scan counter value to a scan count status word** to determine that said status came from a single scan cycle." Where in Logan is any **"scan count status word"**, let alone an activity **"copying a scan counter value to a scan count status word** to determine that said status came from a single scan cycle"? Once again, it simply is not present. Because Logan falls far short of describing the claimed limitation, Applicants respectfully suggests that the rejection of claim 89 is unclear, incomplete, and improper. Accordingly, it is respectfully submitted that the rejection of claim 89 is unsupported by Logan and should be withdrawn.

Contrary to an erroneous assertion of the present Office Action (*see* Page 8), claim 90 recites, yet Logan does not expressly or inherently teach or suggest, **"clearing a flag in a buffer**

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if said scan count status word is different from said current value of said scan counter.” Where in Logan is any **“flag in a buffer”**, let alone an activity **“clearing a flag in a buffer** if said scan count status word is different from said current value of said scan counter”? Simply put, it is not in Logan. Because Logan does not describe the claimed limitation, Applicants respectfully suggests that the rejection of claim 90 is unclear, incomplete, and improper. Accordingly, it is respectfully submitted that the rejection of claim 90 is unsupported by Logan and should be withdrawn.

Contrary to an erroneous assertion of the present Office Action (*see* Page 9), claim 94 recites, yet Logan does not expressly or inherently teach or suggest, **“determining a status window size by a number of operand values** returned from an execution of said section of said program, said status window adapted to display said status of said instruction.” Because Logan describes nothing close to the claimed limitation, Applicants respectfully suggests that the rejection of claim 90 is unclear, incomplete, and improper. Accordingly, it is respectfully submitted that the rejection of claim 90 is unsupported by Logan and should be withdrawn.

**III. The Present Office Action Fails to Respond to All of Applicants' Arguments**

In response to an Office Action dated 17 December 2004, Applicants filed a proper Reply on 25 February 2005, which is incorporated herein by reference. In traversing a rejection of independent claim 52, Applicants presented the following argument that stands unopposed in the present Office Action:

Logan allegedly recites **“a computer”** that **“compiles the program** from the flowchart to control the operations of a machine.” See Abstract. Thus, Logan debugs via a **“computer”** that **“compiles”** an entire **“program”** ... [i]ndependent claim 52 recites

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**“displaying a section of said program indicated by a user to be debugged, said section comprising fewer instructions than said entire program; compiling said section of said program to be debugged in a second section of memory.”**

See page 8 of 11. Each of independent claims 52, 95, and 96 recite “said section comprising fewer instructions than said entire program; compiling said section of said entire user control program to be debugged in a second section of memory”. Thus, Applicants respectfully submit that Logan does not expressly or inherently teach or suggest all of the elements and limitations of each of independent claims 52, 95, and 96.

The present Office Action fails to respond whatsoever to this previously presented and persuasive argument. Thus, Applicants respectfully request each of the withdrawal of each of the rejections of independent claims 52, 95, and 96.

**IV. The Finality of the Office Action is Improper and Should be Withdrawn**

A proper Office Action must be complete as to all matters, must provide a clear explanation of all actions taken, and must answer in detail the substance of each of Applicants' submitted arguments. See MPEP 707.07(f).

As discussed above, the rejection of claim 52 in the presently outstanding 6 June 2005 Office Action does not address the argument raised in response to the previous Office Action dated 17 December 2004. Although a substantive response to the 17 December 2004 Office Action was submitted, including arguments explaining why the applied references did not render obvious the subject matter of claim 52, those arguments have not been addressed in the presently outstanding 6 June 2005 Office Action. Accordingly, Applicants respectfully submit that the



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finality of the 6 June 2005 Office Action is improper, and respectfully request that the finality of the 6 June 2005 Office Action be withdrawn.

Additionally, because the unclarity, incompleteness, and legal misrepresentations of the above-described paragraphs of the 6 June 2005 Office Action in rejecting one or more of claims 52, 86-90, and 94, Applicants respectfully submit that the finality of the 6 June 2005 Office Action is improper. Thus, Applicants respectfully request that the finality of the 6 June 2005 Office Action be withdrawn.

**V. Allowable Subject Matter**

The following is a statement of reasons for the indication of allowable subject matter:

"none of the references of record alone or in combination disclose or suggest the combination of limitations found in the independent claims. Namely, claims 52-58 and 84-96 are allowable because none of the references of record alone or in combination disclose or suggest 'regarding an entire user control program stored in a first section of memory and executed by a programmable logic controller, while said entire user control program is executing and without significantly interfering with execution timing of said entire user control program, via a programmable logic controller operating system program: displaying a section of said entire user control program indicated by a user to be debugged, said section comprising fewer instructions than said entire user control program; compiling said section of said entire user control program to be debugged in a second section of memory; without stopping execution of said entire user control program, automatically jumping to said second

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section of said memory during real time execution of said entire user control program when an instruction indicated to be debugged is to be executed; and capturing a status of said instruction as it is executed.”

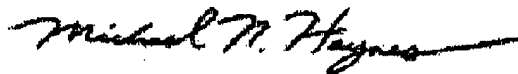
**CONCLUSION**

It is respectfully submitted that, in view of the foregoing amendments and remarks, the application as amended is in clear condition for allowance. Reconsideration, withdrawal of all grounds of rejection, and issuance of a Notice of Allowance are earnestly solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to Deposit Account No. 50-2504. The Examiner is invited to contact the undersigned at 434-972-9988 to discuss any matter regarding this application.

Respectfully submitted,

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